Living a discrete life in a continuous world

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DSALT Workshop
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bought yesterday
sick daughter drank from bought yesterday
I broke my new mug!
bought yesterday

\( \text{mug}(x) \)
\( \text{bought}_\text{yesterday}(x) \)
sick daughter drank from

bought yesterday

\[
\begin{align*}
x, y \\
mug(x) \\
bought\_yesterday(x) \\
mug(y) \\
sick\_daughter\_drank\_from(y)
\end{align*}
\]
I broke my new mug

x, y, z
mug(x)
bought_yesterday(x)
mug(y)
sick_daughter_drank_from(y)
broken(z)

x=z
sick daughter drank from bought yesterday

I broke my new mug

\[ p_{1948}(x) \]
\[ p_{4050}(x) \]
\[ p_{543}(y) \]
\[ p_{7788}(y) \]
\[ p_{48}(z) \]
\[ x = z \]
add new discourse referent?

Y  N

11/21
add new discourse referent?

Y N

???

p(mug)

w

add

w

cup

mug

cat
if \( \text{sim}(x, y) > t \)
then:
\[ x = y \]
memory vector array at time $n$

1) memory vector array

2) memory vector array

...
map new information to vector

a)

bought yesterday

compute affinity score with existing memory vectors + 1

b)

add new information to memory vectors weighting by affinity

c)
when did you first meet the monster you confronted and befriended?

at time 2
<table>
<thead>
<tr>
<th>Model</th>
<th>accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>CoD</td>
<td>.72</td>
</tr>
<tr>
<td>FeedForward NN</td>
<td>.36</td>
</tr>
<tr>
<td>Object Oracle Baseline</td>
<td>.50</td>
</tr>
<tr>
<td>Smart Predicate Baseline</td>
<td>.30</td>
</tr>
<tr>
<td>Chance</td>
<td>.17</td>
</tr>
</tbody>
</table>
bought yesterday
sick daughter drank from
should I wash this cup?

should I wash this cup?